

IMPERATIVES FOR CHANGE 2012 PERFORMANCE REPORT



Statewide Progress on Higher Education Goals

Imperatives for Change is Missouri's comprehensive plan for higher education. Progress toward achieving its three strategic goals is graphically illustrated in the dashboard below.

EDUCATIONAL ATTAINMENT



Preparation

36 percent of recent Missouri high school graduates must take remedial coursework and are unprepared for college level classes; this is slightly lower but relatively unchanged from the previous two years.



Participation

More than 68 percent of recent Missouri high school graduates enroll in post-secondary education following graduation; this is relatively unchanged from the previous year.



Persistence

More than 69 percent of full-time freshmen students re-enroll at the same institution; this is slightly lower than the last several years which have had rates above 70 percent.



Completion

55 percent of 4-year university students graduated with a degree within 6 years; this is slightly lower but relatively unchanged from the previous year. 47 percent of 2-year college students graduate or transfer within 3 years; this is significantly higher than last year's rate of 44 percent.



Affordability

State support for higher education declined 7 percent in 2011-2012. Meanwhile, public colleges and universities are holding tuition increases below the national average, 10 percent to 25 percent over the past 5 years.



Credential Production

Missouri institutions produced nearly 102,000 degrees and certificates in FY 2011, a 26 percent increase since FY 2006.



Academic Progression

The percent of full-time degree seeking students who complete at least 24 credit hours within three semesters fell at two year institutions from 47 percent for fall 2009 to 39 percent for fall 2010. However, at 4-year institutions this rate remained at 82 percent.

IMPACT ON THE ECONOMY



Meeting Workforce Needs

The number of graduates working in Missouri within one year of completing college increased by 1,000, an increase of 4 percent in one year.



Scores on Professional Licensure Exams

In 2011, 70 percent of licensure examinations for jobs in teaching, STEM or healthcare professional were scored as passing, down from 72 percent in 2010.

**In the context of this report, for nationally normed examinations, passing means scoring at or above the 50th percentile of test-takers.*

INVESTMENT IN THE FUTURE



State Appropriations

In FY 2012, the state ranked 43rd in the country in appropriations for higher education per \$1,000 of personal income, and 44th in per capita support for higher education.



Research

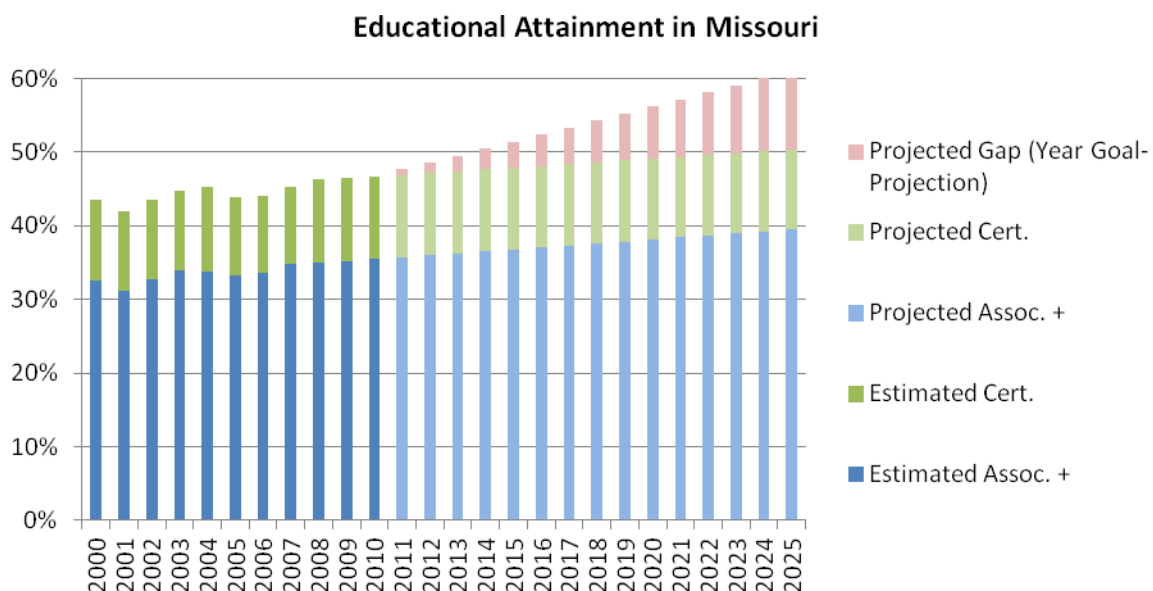
In FY 2010, Missouri institutions spent more than \$779 million on research funded by outside sources such as foundations and corporations. This amount reflects a nearly 7 percent increase from the previous fiscal year.

EDUCATIONAL ATTAINMENT



Missouri's Big Goal is to increase the percentage of working age adults with a degree or high quality certificate from 46 percent to 60 percent of the population by 2025.

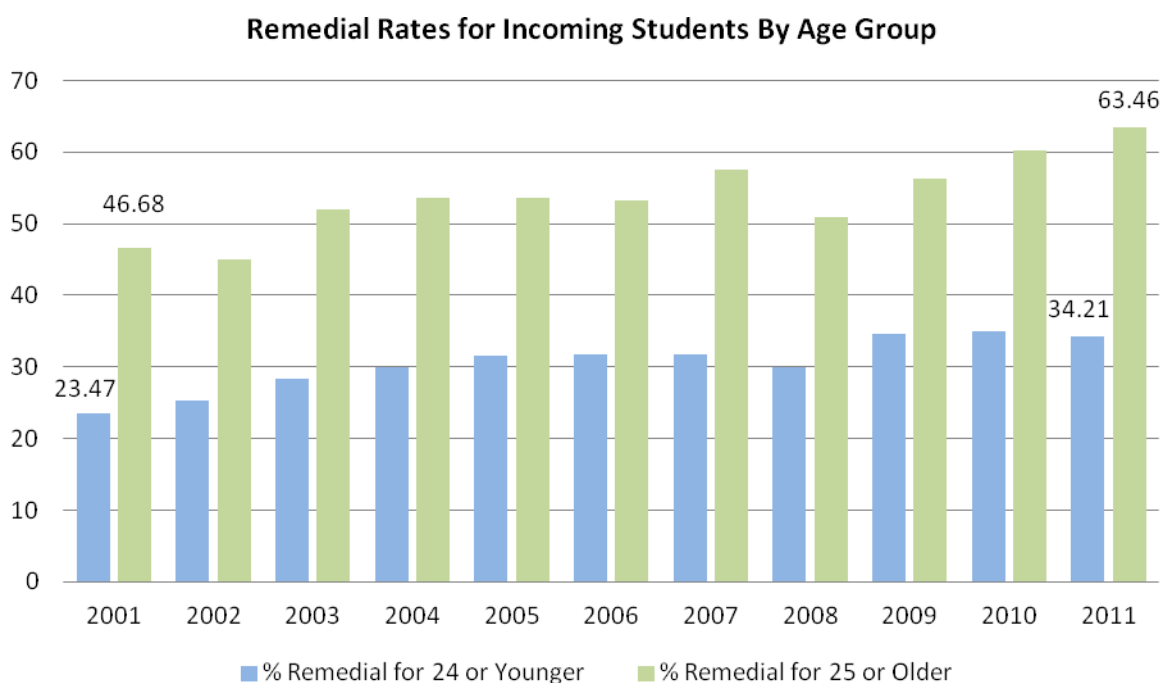
“Education and training of Missouri’s workforce needs to be the centerpiece of new economic policy to drive a more advanced and sophisticated workforce,” according to the Missouri Economic Research and Information Center.ⁱ Recent work at the Missouri Department of Higher Education estimates that the number of Missourians ages 25 - 64 who hold a postsecondary certificate or higher surpasses 46 percent. But without concerted action to enroll, graduate and certify more citizens, Missouri will still fall short of its 60 percent goal by nearly 10 percent. In order to reach the 60 percent goal, Missouri must increase its annual production of degrees and certificates by about 3,000 (more than 3 percent) each year.



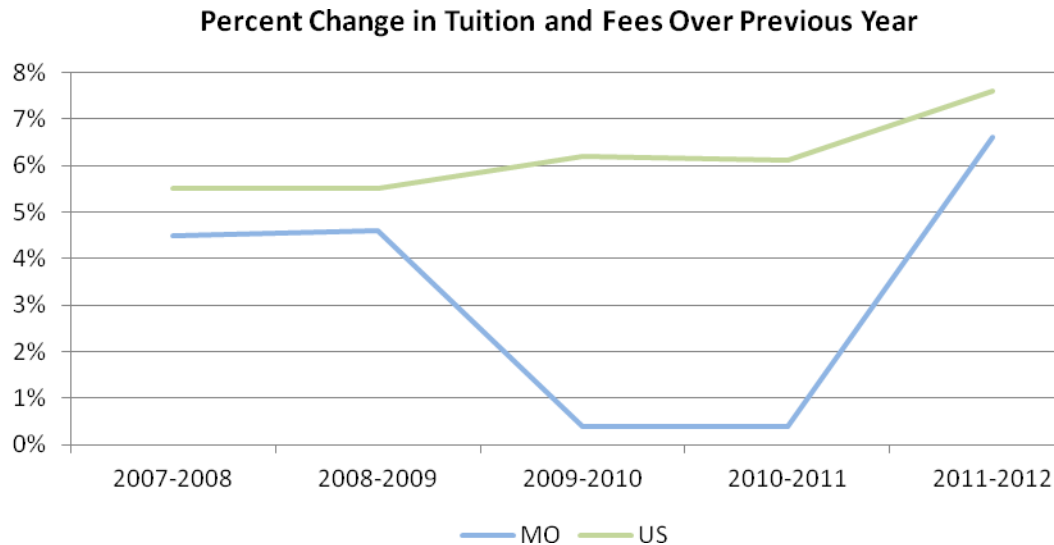
Degree and certificate production can only be increased if Missouri improves performance at each stage of student preparation and progress. In 2012, more than 68 percent of high school graduates in Missouri indicated they would enroll in postsecondary education within 6 months of graduation.ⁱⁱ This rate remains virtually unchanged from 2011. Similarly, persistence rates of first-time, full-time students at Missouri institutions also remain flat, with 70 percent of students

enrolling at the same institution for the subsequent fall semester.ⁱⁱⁱ In addition, graduation rates have dipped slightly over the previous year, meaning fewer Missouri students are obtaining degrees on time.^{iv}

Of special concern is the need for remedial / developmental education before entering students can do college-level work. In the fall of 2011, 34 percent of first-time students younger than 25 who enrolled in a public college or university required remediation. Among students who start college at age 25 or older, the rate rises to 63 percent. The Missouri Department of Higher Education, secondary schools, colleges and universities are exploring better ways to prepare students to do college-level work. Implementation of the Common Core State Standards in 2014 is expected to improve student preparation at the secondary level. Colleges and universities are using best practices in remedial education to improve outcomes for students. These include embedding academic help in for-credit courses and strengthening support in gateway courses.



Affordability also contributes to students' chances of completing a degree. Studies show a correlation between the amount of unmet need and the probability of dropping out of college. In order to keep college costs affordable, Missouri enacted legislation in 2008 to tie the increases in tuition and fees charged at public universities to inflation. A tuition freeze negotiated by Gov. Nixon in 2009 – 2011 held tuition flat for two years. Consequently, tuition and fees at Missouri postsecondary institutions have increased by approximately 10 percent over the past five years, compared to more than 25 percent nationwide.



Financial aid increases the odds of persisting for those with lower incomes.^v Targeted, effective financial aid works in concert with cost control to open college doors to first generation and economically disadvantaged groups. The last time the state’s need-based student aid program, Access Missouri, was fully funded was in 2008-09. In 2009-10, program funding levels were set at 78 percent of the statutory maximums, and in 2011-12, funding fell to 48 percent of the maximums, resulting in a reduction of more than \$1,000 to the average award. Access funding rebounded by three percent in the 2012-13 academic year.

Bright Flight, the state’s scholarship fund for high-achieving students, also declined during the economic downturn but increased from \$1,750 to \$2,000 this year.

The A+ scholarship program covers the cost of tuition and academic fees for two years at community colleges and technical schools for students from A+-designated high schools who meet academic, conduct and attendance standards and perform 50 hours of tutoring or mentoring service. Funding for the A+ program increased from \$23 million to \$29 million and the number of students served grew from 10,805 to 11,587.

A recent academic study reveals that state appropriations for higher education are strongly related to a state’s baccalaureate degree production. Specifically, by investing 10 percent more in per capita appropriations, the state can produce 21,000 additional bachelor’s degrees by 2025.^{vi}

IMPACT ON THE ECONOMY



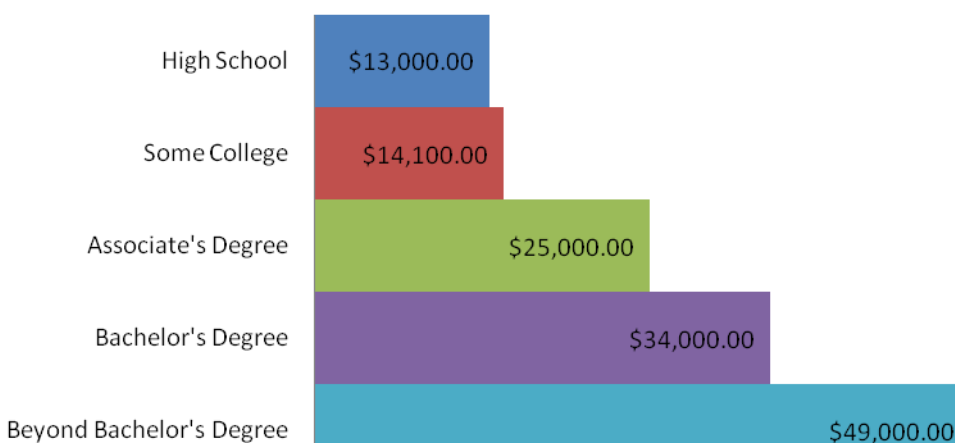
A higher percentage of college graduates in the workforce has been shown to lift the wages of all workers, not just those with degrees.^{vii}

Higher education increases the value of Missouri's human capital. According to the Bureau of Labor Statistics, the 2011 unemployment rate among adults with a bachelor's degree was 4.9 percent, while the average unemployment rate across all education levels was 7.6 percent.^{viii} Additionally, research suggests that a bachelor's degree nets about \$800,000 more in lifetime earnings compared to those with just a high school diploma.^{ix} The typical university graduate also spends more than the average high school graduate, and pays roughly 38 percent more in sales taxes.^x

In Missouri, the 2010 unemployment rates for individuals with some college education is just over 8 percent, and drops to just over 3 percent for individuals with a bachelor's degree or higher.^{xi} However, individuals with a high school diploma are experiencing unemployment rates as high as 11 percent.

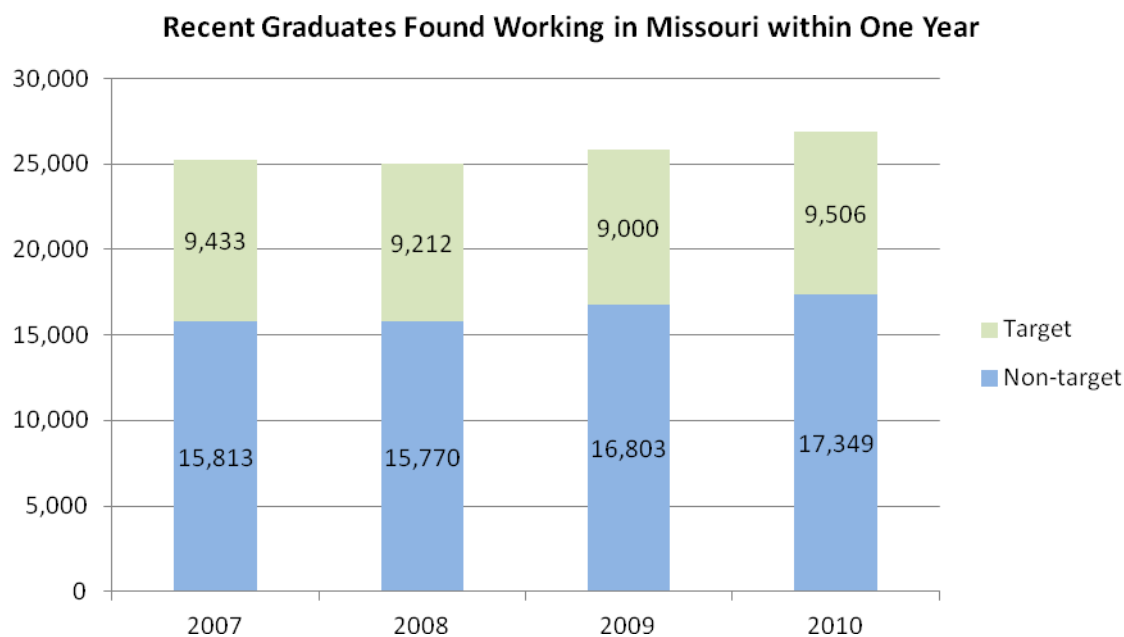
In addition, the median earnings for these groups in Missouri show clear benefits for postsecondary education. Among adults between the ages of 18 to 65, the median annual salary for a person with a high school diploma, some college education and a bachelor's degree or higher are \$13,000, \$14,100 and \$34,000, respectively.

Median salary for Missouri adults, ages 18-65



Economic growth in targeted industries may mitigate statewide unemployment. The Missouri Department of Economic Development has identified eight targeted industries based on a variety of measures, such as industry strength and future growth potential. The targeted industries are advanced manufacturing, energy solutions, biosciences, health care sciences and services, information technology, financial and professional services, and transportation and logistics. Understanding and strengthening these targeted industries will benefit Missouri's economy.

One method to strengthen these industries in Missouri is to increase the supply of skilled workers. Among 2010 graduates, 27,000 were found working in Missouri one year after graduation; more than one third were found working in targeted industries. Graduates from 2010 earned \$730 million and contributed more than \$51 million in state income taxes in 2011. Compared to Missouri's overall workers, recent graduates employed in a targeted industry earned \$8,000 more in annual income. The number of recent graduates who were found working in Missouri has increased six percent over the past four years.



Higher education institutions also contribute to the economy through research and business development efforts. The University of Missouri's four campuses, for example, are among the top 25 percent of universities in licensing revenue — \$7.76 million — generated from research-developed intellectual property.^{xiii} By dedicating significant resources to research and development efforts, higher education helps move all levels of the economy forward.

INVESTMENT IN THE FUTURE



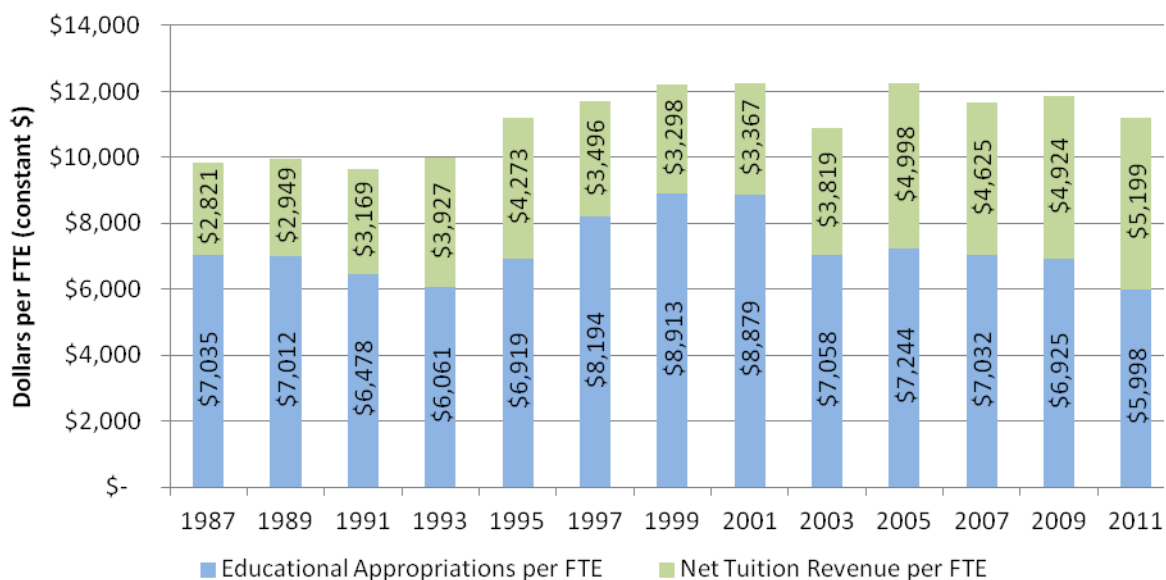
State and local fiscal benefits amount to more than twice the amount state and local governments spend for every degree earned from public colleges

Higher education is a good investment. Researchers estimate that those with a bachelor's degree pay roughly 2.5 times as much state income tax and 3.3 times as much federal income tax compared to the average high school graduate.^{xiii} Overall, state and local fiscal benefits, such as reduced welfare expenditures and higher income taxes, amount to almost 2.4 times what state and local governments in the U.S. spend for every degree earned from public colleges.

Conservatively, public funding of higher education has about a 3.1 percent average rate of return to state and local governments.^{xiv}

Yet state subsidies for public higher education in Missouri have fallen considerably over the past decade. In FY 2012 alone, state support for higher education in Missouri decreased by more than 7 percent. Additionally, according to the State Higher Education Executive Officers Association tabulations of comparative state fiscal support for higher education, between FY 2007 and FY 2012 Missouri decreased state support of higher education five percent, higher than the approximately 4 percent drop nationwide.^{xv} Missouri ranks 24th among the 50 states in changes to state support for higher education over the past five years.

Educational Appropriations and Total Educational Revenue per FTE
Fiscal Years 1987 - 2011



Source: SHEEO

Continuing to invest in higher education can pay dividends far down the road for Missouri's economy. In 2011, Missouri was ranked 33rd by Beacon Hill in state competitiveness, down from the previous year's rank of 30.^{xvi} Despite the drop in ranking, some of the advantages for Missouri cited in the study include the percentage of the population enrolled in degree-granting institutions, academic science and engineering research and development, and the presence of scientists and engineers in the labor force. Support for higher education is an effective tool for maintaining and improving Missouri's economy and ability to compete for business and industry.

ⁱ Missouri State of the Workforce Report: 2011 http://www.missourieconomy.org/pdfs/sowfr_2011.pdf

ⁱⁱ Missouri Department of Elementary and Secondary Education High School Graduates 180-day Follow-up <https://mcids.dese.mo.gov/quickfacts/District%20and%20Building%20Graduation%20and%20Dropout%20Indic/Building%20Graduate%20Analysis.xls>

ⁱⁱⁱ IPEDS Fall Enrollment 2010. Accessed online: <http://nces.ed.gov/ipeds/datacenter/>

^{iv} IPEDS Graduation Rates. Accessed online: <http://nces.ed.gov/ipeds/datacenter/>

^v Serge Herzog, "Measuring Determinants of Student Return vs. Dropout/Stopout vs. Transfer: A First-to-Second Year Analysis of New Freshmen," *Research in Higher Education* 46, no. 8 (December 2005): 901.

^{vi} Marvin A. Titus, "The Production of Bachelor's Degrees and Financial Aspects of State Higher Education Policy: A Dynamic Analysis," *The Journal of Higher Education* 80, no. 4 (July/August 2009): 456.

^{vii} *Education Pays: The Benefits of Higher Education for Individuals and Society; 2007*

^{viii} *Education Pays...* (Bureau of Labor Statistics, 2011, accessed 12 August 2011); available from http://www.bls.gov/emp/ep_chart_001.htm

^{ix} Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society* (CollegeBoard, 2007, accessed 22 August 2011); available from http://www.collegeboard.com/prod_downloads/about/news_info/cbsenior/yr2007/ed-pays-2007.pdf, 10.

^x Phillip A. Trostel, "The Fiscal Impacts of College Attainment," *Research in Higher Education* 51, no. 3 (May 2010): 231.

^{xi} *Missouri Unemployment Rates and Earnings by Education* (Missouri Economic Research and Information Center, 2010, accessed 12 October 2012); available from http://www.missourieconomy.org/occupations/education_pays_2010.html

^{xii} Based on a 2011 report from the Association of University Technology Managers

^{xiii} Trostel, "The Fiscal Impacts of College Attainment," 231.

^{xiv} *Ibid.*, 242.

^{xv} *Grapevine, Table 1* (Illinois State University, 2011, accessed 12 August 2011); available at <http://grapevine.illinoisstate.edu/tables/index.htm>

^{xvi} Eleventh Annual State Competitiveness Report. Beacon Hill. <http://www.beaconhill.org/Compete11/Compete2011.pdf>